

Pending Claims on Appeal

Claim 1. A coronary stent having a longitudinal axis along the length of the stent comprising:

- a. a first loop containing section having loops, said first loop containing section having an axis orthogonal to the longitudinal axis of the stent, the loops in said first loop containing section occurring at a first frequency;
- b. a second loop containing section having loops, said second loop containing section having an axis orthogonal to the longitudinal axis of the stent, the loops in said second loop containing section also occurring at said first frequency;
- c. said first and second loop containing sections each form a single, continuous, generally sinusoidal pattern around the entire circumference of the stent; and
- d. a third loop containing section, said third loop containing section formed of a single, continuous, generally sinusoidal pattern also having an axis orthogonal to the longitudinal axis of the stent, the loops in said third loop containing section occurring at a second frequency that is higher than said first frequency, said third loop containing section disposed in the general circumferential space between each of said first and second loop containing sections to form consecutive repeating patterns along the longitudinal axis of the stent for at least two repetitions and alternately joined to said first and second loop containing sections directly ~~without any intervening material~~ at curved portions of said first, second and third loop containing sections, forming a uniform pattern of flexible cells;

- e. the loops in said first, second and third loop containing sections being disposed and adapted to cooperate so that, components of said third loop containing section contribute to the cell's elongating or shortening when the stent is flexed; and
- f. the loops of the first, second, and third loop containing sections further include struts having a thickness in the radial direction and width in the circumferential direction, wherein the struts of the first and second loop containing sections are wider than the width of the struts of the third loop containing section.

Claims 2-5. (canceled)

Claim 6. A coronary stent comprising:

- a. a first circumferential band, formed of a single, continuous, generally sinusoidal pattern of loops at a first frequency having a single axis extending around the entire circumference of the stent;
- b. a second circumferential band, formed of a single, continuous, generally sinusoidal pattern of loops, said second band having an axis parallel to the axis of the first band, and said loops occurring at a second frequency higher than said first frequency, said second circumferential band extending in a continuous pattern of loops around the entire circumference of the stent, said first circumferential band alternating with said second circumferential band to form consecutive patterns along the longitudinal axis of the stent for at least two repetitions, said second bands periodically coupled to said first bands directly ~~without any intervening material~~ at curved portions of said first and second circumferential bands to form cells;

c. patterns of loops in said bands being disposed and adapted to cooperate so that second circumferential bands contribute more than first circumferential bands to deformation during flexing of the stent; and

d. the loops of the first, and second bands further include struts having a thickness in the radial direction and width in the circumferential direction, wherein the struts of the first bands are wider than the width of the struts of the second bands.

Claims 7-41. (canceled)

Claim 42. A stent according to claim 1, wherein the loops in the first loop containing sections are all in phase.

Claim 43. A stent according to claim 1, wherein, upon expansion, the cells on the outside of a curved section of the stent narrows as the cells elongate, and cells inside of a curve widen as the cells shorten.

Claim 44. A stent according to claim 6, wherein, upon expansion, the cells on the outside of a curved section of the stent narrows as the cells elongate, and cells inside of a curve widen as the cells shorten.

Claims 45-48. (canceled)

Claim 49. A coronary stent having a longitudinal axis along the length of the stent consisting essentially of in both the unexpanded and expanded state:

a. a first loop containing section, said first loop containing section having an axis perpendicular to the longitudinal axis of the stent, the loops in said first loop containing section occurring at a first frequency;

- b. a second loop containing section, said second loop containing section having an axis perpendicular to the longitudinal axis of the stent, the loops in said second loop containing section also occurring at said first frequency, said second loop containing section being 180° out of phase with said first loop containing section along the longitudinal axis of the stent;
- c. at least one of said first and second loop containing sections formed of a single, continuous, generally sinusoidal pattern; and
- d. a third loop containing section, said third loop containing section formed of a single, continuous, generally sinusoidal pattern extending in a continuous band of loops around the entire circumference of the stent, the loops in said third loop containing section occurring at a second frequency that is higher than said first frequency, said loops in said third loop containing section having an axis parallel to the axis of the first and second loop containing sections, said third loop containing section disposed in the generally circumferential space between each of said first and second loop containing sections to form consecutively repeating patterns along the longitudinal axis of the stent for at least two repetitions and alternately joined to said first and second loop containing sections, said first, second and third loop containing sections forming a pattern of uniform cells; and
- e. the loops of the first, second, and third loop containing sections further include struts having a thickness in the radial direction and width in the circumferential direction, wherein the struts of the first and second loop containing sections are wider than the struts of the third loop containing section.

Claims 50-51. (canceled)